

126

HEAT EXCHANGER

PAJ 00-47-76 01147294 JP NDN-190-0011-8155-6

INVENTOR(S)- YASUNOBU, ITO; YOSHIYUKI, YAMAUCHI; TAKESHI, MATSUNAGA

PATENT APPLICATION NUMBER- 62306468

DATE FILED- 1987-12-03

PUBLICATION NUMBER- 01147294 JP

DOCUMENT TYPE- A

PUBLICATION DATE- 1989-06-08

INTERNATIONAL PATENT CLASS- F28F00140

APPLICANT(S)- NIPPON DENSO CO LTD

PUBLICATION COUNTRY- Japan

PURPOSE: To provide an uniform heat exchange action throughout the whole surface of a heat exchanger and to sharply improve heat exchange capacity, by providing a flat metallic pipe through which heat-exchangeable fluid is caused to flow and a metallic foam located in the metallic pipe and uniformizing the flow of the fluid.

CONSTITUTION: An evaporator is provided with a bent beltform flat metallic pipe 10, and each fin 20 is engaged between parallel pipe parts 11 of the flat metallic pipe 10 by soldering. A blockform metallic foam 30 is engagedly mounted longitudinally of the flat metallic pipe 10 in the flat metallic pipe 10, and the outer surface of the metallic foam 30 is uniformly secured on the inner surface of the flat metallic pipe 10 by soldering. A foaming metallic material is formed of an aluminum material, being light and excellent in heat transfer, so as to have the coefficient of foam of 60W90%. A skeleton is formed in a three-dimensional uniform netty shape like a sponge, and when a refrigerant flows, the refrigerant uniformly generates turbulence due to a number of the meshes of the metallic foam 30 through the whole of the metallic foam 30.

COPYRIGHT: (C)1989,JPO&Japio

NO-DESCRIPTORS.